Rebuilding health in Yemen after conflict

Engaging the Yemeni diaspora community in conversations on health system reconstruction

Summary

It is one and a half years since the beginning of the coalition-led military intervention in Yemen. This report summarises key findings from a workshop with Yemeni diaspora held in Liverpool in June 2016, focusing on rehabilitating and reconstructing Yemen's health system once the conflict subsides. The workshop focused on identifying priority actions to support health system reconstruction.

The workshop forms part of a broader project on health system reconstruction planning that has been led by the Yemen Health Network (*Musāhamatna*), a newly established civil society initiative bringing together diaspora Yemenis, including health specialists, health professionals, humanitarian aid workers and health practitioners, researchers and others. The workshop was delivered in collaboration with Medact, ReBUILD and the Liverpool Arab Arts Festival, with support from Saferworld.

Background

It is now over a year since the start of the conflict in Yemen. Aid agencies must rightly continue to focus on immediate relief efforts. But there is an urgent need to consider possible paths for the country in the years ahead, and plan appropriately for reconstruction once the fighting calms.

Nowhere is this need greater than in health. Before the upsurge in violence in March 2015, access to healthcare was poor, especially in rural areas, and most Yemenis paid for medical care out-of-pocket[1]. Despite improvements since 1990, health outcomes at the start of the conflict were also, in global terms, weak: a maternal mortality ratio of 270 per 100,000 births; under-5 child mortality of 60/1,000; and variable vaccination coverage[2]. Since March 2015 the capacity of Yemen's fragile health system to respond to growing needs has been greatly diminished by extensive damage to medical facilities, supply shortages and safety concerns for health workers. According to the World Health Organisation (WHO), the Yemeni health system has "collapsed"[3].

This briefing assembles key findings from a workshop conducted in Liverpool on 4th June 2016 – with the aim of broad Yemeni diaspora participation. It follows on from a first event held by *Musāhamatna* as part of Medact's *Health through Peace* conference in London to think through possible trajectories for health in Yemen under a range of scenarios over the five years to 2020, and begin to identify some priority actions to rehabilitate the health system in each case. The findings from that event are available elsewhere.[4]

What is a health system?

WHO's 'building blocks' provide a convenient framework for understanding health systems. The framework incorporates six blocks, which together contribute to the establishment of a strong and resilient health system: able to meet the needs of the population and capable of absorbing shocks of limited magnitude. For the purposes of the workshop, two pairs of building blocks were amalgamated to leave a final list of four summary blocks for discussion in breakout groups:

- Governance and financing: governance describes the strategic oversight, regulation and accountability mechanisms that allow a health system to operate effectively – both locally and nationally. Financing describes the way in which funds to support a functioning health system are raised and distributed. It is also concerned with protecting citizens from financial catastrophe or impoverishment associated with large, one-off payments for healthcare.
- Workforce considerations are of critical importance for effective health systems. A strong workforce is one that is appropriately trained to serve population health needs, distributed fairly nationwide, and able to respond efficiently to ensure good health outcomes.

[1] Aulaqi A. On the edge: the challenges of Yemen's healthcare system. Chapter 12 in Lackner H (ed). Why Yemen Matters: a society in transition. London: Saqi Books; 2014.

[2] UNICEF. *Statistics at a Glance: Yemen* [online at: http://www.unicef.org/infobycountry/yemen_statistics.html#115 – accessed 14/07/2016]

[3] WHO. Urgent support needed to provide health services for 15 million people in Yemen [online at: http://www.emro.who.int/media/news/support-needed-to-provide-health-services-in-yemen.html - accessed 14/07/2016]

[4] Saferworld. Public Health Scenarios in Yemen [online at: https://yemenhealth.wordpress.com/workshops-and-meeting-reports/ – accessed 04/08/2016]

- Health services, medicines and medical technologies: health services should be safe, effective, and of high quality, wherever delivered. Importantly in low resource settings, they should also be tailored to meet priority needs to ensure that resource waste is kept to a minimum. No health service can function effectively without medicines and medical technologies that are of appropriate quality, proven clinical and cost-effectiveness, and available as and when needed.
- Information and research describes both the way that basic health intelligence and disease surveillance information is gathered and analysed to inform decision-making.

In conflict, the stresses imposed on foundation 'blocks' may be severe enough to bring about whole health system collapse. But it is more common for health systems to be compromised or service delivery curtailed, especially in lower intensity conflicts and post-conflict settings where stability varies between geographical areas.

The impact of the conflict on the Yemeni health system

Perspectives from public health specialists and service providers

Despite low levels of funding and long-standing issues with healthcare capacity both nationally and locally in Yemen, steady progress in reducing mortality and prolonging life occurred between 1990 and 2013. Pre-term birth complications reduced by 61.2% over this period, mortality from diarrheal diseases by 83.4%, lower respiratory infections by 79.1%, and malaria by 48.6%. In addition there were reductions in malnutrition, and maternal causes of

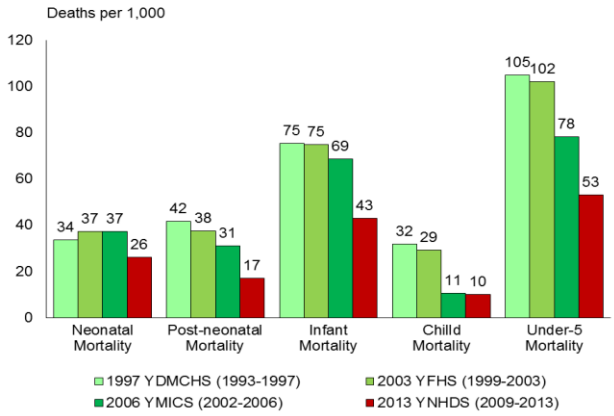

Figure 1: mortality rates in Yemen from success generations of surveys, 1993-2013.

death. These improvements can be attributed to a combination of population resilience, tribal and familial support systems, the growth in private sector service provision alongside the public sector, and improvements in public health services including vaccination coverage.

However, there is growing quantitative evidence that health outcomes for ordinary Yemenis are worsening. Under 5 child mortality rose from 53 per 1,000 in 2013 to 62.4 in 2015, compared with a projected 42 per 1,000 if pre-war trends had continued. It is estimated that progress on under 5 mortality in Yemen had been set back about 10 years by the end of 2015. Childhood anaemia rates, which had been high in Yemen pre-conflict (some 86% of children tested in 2013 were anaemic) stood at 95.2% by the end of 2015. Widely anticipated impacts on nutritional status are also being realised: prevalence of wasting among Yemeni children had increased by 25% from 2013 data by the end of 2015.

Importantly, large regional inequalities are emerging in key health indicators, as the two charts

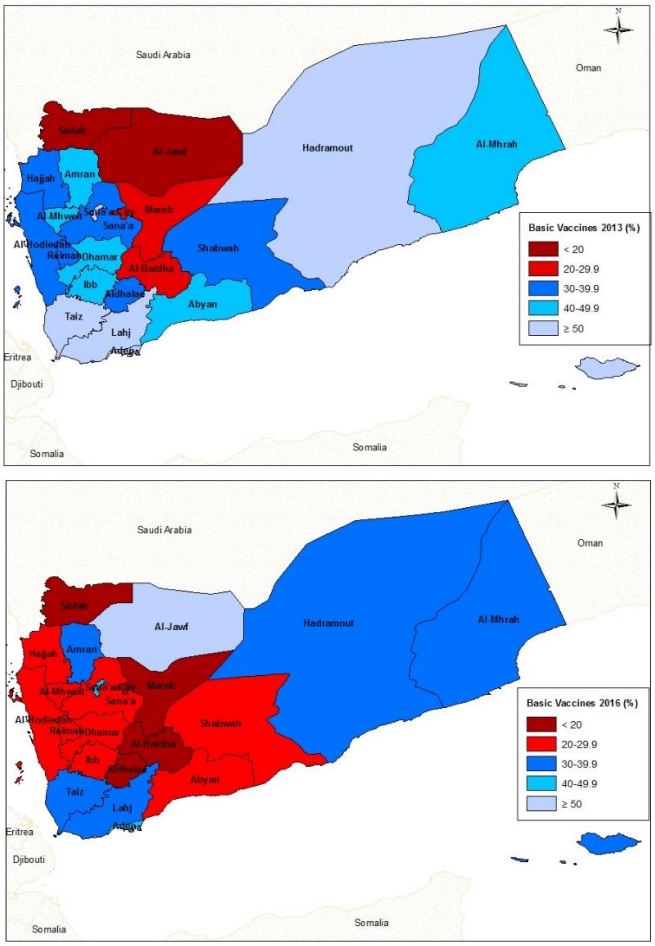

Figure 2: percentage coverage of basic vaccinations among Yemeni children, by governorate, in 2013 (top) and 2015 (above).

documenting basic vaccination coverage in figure 2 demonstrate[5]. These partly reflect the varying intensity of fighting nationwide and ongoing difficulties

[5] These figures are drawn from a presentation given at the workshop by Dr Aisha Jumaan, and are based on needs assessment data from Yemen.

with access especially in remote areas – among other factors.

The volatile security situation, including risk of bombardment and kidnapping, continues to hamper health service delivery. Whilst international agency presence is limited, *Médecins sans Frontières* (MSF) continue to be a key presence on the ground. There has also been heavy involvement from the Yemeni and Qatari Red Crescent Societies. Access to affected populations, in the view of MSF, remains acceptable, although insecurity is particularly pronounced in provinces like Aden or Taiz, and the situation in some governorates – notably Sa'adah in the North – is extremely challenging. For the most part, agencies are focusing on provision of emergency and trauma care, water and sanitation, and provision of non-food items. Specialist care has become increasingly difficult because of irregular supplies (including electricity and water) and health worker flight. In 2015, for example, MSF spent over €1m supporting provision of dialysis for patients in need, in the absence of normal care. Although MSF report that immunisation programmes are now to a degree operational again, services for infectious diseases such as TB and HIV, which depend on continuity of contact, are being provided in increasingly ad hoc fashion.[6]

Citizens' perspectives

In preparation for the Liverpool workshop a pilot survey with a small (n = 12) sample of Yemenis from the diaspora community in the UK gathered a qualitative view of citizens' perspectives on access to health services since the start of the conflict. Respondents came mostly from Ibb and Al Dhale governorates in Southwest Yemen. Questions sought personal views, and second-hand information from relatives and friends living in Yemen.

Respondents reported considerable challenges in accessing appropriate healthcare. One cited the example of a family member in a large city in Yemen who had sustained a broken leg but was unable to reach a hospital to have it cast (typically a straight forward medical procedure), and had improvised a wooden splint at home instead. Others mentioned increasing crowding at medical facilities as a barrier to timely access.

Limited supplies of essential medicines and rising prices since the start of the conflict were widely reported, along with stockpiling of expired medications and counterfeits. One implication of rising medication prices and increasing scarcity of essential medicines is self-rationing. For example, asthma inhalers used only when absolutely required.

Equally, there is evidence that medical staff in outlying areas re-direct people to major centres in, for example, Sana'a because supply shortages in their own facilities mean that they cannot provide appropriate care. However, the security situation in the country and rising cost of fuel makes travel to the capital difficult.

According to those who responded, preventive services have slowed considerably since the start of the conflict. This includes vaccination in rural governorate areas.

The path ahead for the Yemeni health system: scenarios to 2020

The three crude scenarios described below helped structure project discussions. These scenarios purposefully avoid detailed consideration of political and international dimensions of the conflict in Yemen. Instead scenarios focus on technical aspects of health service delivery.

1. **Patchy health system coverage**: in this scenario (essentially a continuation of the current position), delivering health services in areas where fighting is intense continues to be difficult. But some care provision is possible elsewhere. National health system governance and leadership structures break down and funding becomes tighter. Multiple health systems emerge in different parts of the country. Many health workers either leave the country or their homes, so that staffing in clinics and hospitals becomes increasingly short. Supplies of essential medicines break down in areas where fighting is particularly intense. In this environment, we could expect: occasional outbreaks of infectious disease – larger than before the start of the conflict; worsening maternal mortality and child mortality; and widespread malnutrition with particular rises in acute malnutrition among children.
2. **Complete health system collapse**: in this scenario, health service delivery becomes virtually impossible across the country. There is a complete breakdown in national governance structures. Most health workers either leave the country or their homes, so that staffing in clinics and hospitals becomes increasingly short. Supplies of essential medicines break down completely so that most people are unable to obtain medicines. Such a scenario could be expected to lead to a rapid decline in health for Yemenis, with regular, large outbreaks of infectious disease and potentially the re-emergence of catastrophic diseases e.g. polio. We could expect a rapid worsening in maternal mortality and child mortality, and widespread malnutrition with particular rises in acute malnutrition among children – and potentially famine.

[6] Service provider insights are derived from discussions with various individuals working in the field, but draw particularly on personal testimony kindly provided by Juan Prieto, currently Head of Mission for MSF-Spain in Yemen, for the workshop. Juan has 15 years' experience in humanitarian settings in various countries.

3. **Health system recovery**: in this scenario, health service delivery returns to 'normal' pre-war level. National health system governance and leadership structures are re-established, and there is gradual return of health workers and re-establishment of workforce training programmes. Supply of essential medicines is restored nationwide. This scenario is essentially one of recovery: there could be occasional outbreaks of infectious disease – but at pre-war levels; maternal mortality and child mortality rates improve; and there is an improving picture in malnutrition – especially among children.

Our assessment of the probability of these scenarios developing was high for scenario 1, intermediate for scenario 2 and low for scenario 3. On this basis, we asked workshop participants to focus on the first scenario in their breakout discussions.

Implications for health in Yemen and priority areas of action

Participants discussed scenario 1 implications for each of the four building blocks in four small groups. Findings are outlined below.

Group 1: governance and financing

From a governance perspective, participants expressed concern at a pronounced lack of health system accountability and transparency before the conflict – including outright corruption, with particular concerns over mechanisms of funding disbursement to local level. On the other hand, participants acknowledged that the recent implementation of a new electronic system for tracking funding distribution may have helped to address this problem. Participants felt links between central government decision-making in health (at Ministry of Public Health and Population (MoPHP) level) and local programme implementation were weak in general, with limited decentralisation of functions.

Participants argued that there were opportunities in the health sector to take a lead on governance reform. Local stakeholders should be closely involved in helping to improve the situation and in putting new structures in place. Participants in this group also argued for greater direct financial responsibility for healthcare at community-level (see the third priority point below).

Priority actions in governance and financing include:

- Clearer monitoring of financial flows for health nationally and at district level, both now and in the future. This will need support through putting in place new structures, building of infrastructure and in particular, training (in the form of technical support) to ensure funds are properly distributed and corruption minimised. EU Committees offer a good example of how this can be done: set up at governorate level rather than MoPHP level, which helped to nullify some of the corruption that normally takes place. The implication of this is that funding should not be fully centralised through the MoPHP. Instead, the MoPHP will be responsible for central programmes and management; and community groups for local-level funding.
- Increasing the volume of financial resource allocation to health facilities and for health worker training to help support care provision once a firm ceasefire is established. This should be led by the MoPHP but will require significant commitment from donors.
- Allow communities to take more direct financial responsibility for healthcare, possibly through a subscription-based model, fee-per-service or otherwise, in which communities help to fund their healthcare requirements on an agency basis. This, however, raises the prospect of inequalities in access to care emerging across the country.

Group 2: workforce

With continuing insecurity, participants thought loss of key cadres of health workers due to flight or death would be a major challenge, with mal-distribution and understaffing in specific areas a growing problem. Non-payment of salaries is likely to be a major driver of low motivation and absenteeism among workers in this environment. From a training and development perspective, flight of senior staff and faculty would lead to a lack of mentors for those in training. There is a need to upgrade curricula to reflect emergent burdens of disease that were perhaps not such a strong feature in Yemen before the conflict (such as trauma and emerging infectious diseases). There will also be shortfalls in qualified people in important allied professions – notably engineers to support sanitation and water systems.

Priority actions from a workforce perspective include:

- Re-establishing training institutions – through reconstruction of physical infrastructure, equipment, libraries and so forth, with functioning health facilities able to support placements for students. This would need MoPHP and Ministry of Education leadership, working in close collaboration with professional associations, cooperatives and other community-based organisations. International organisations and diaspora academics could also have a strong role in this.
- Investment to create appropriate living and working conditions in remote and insecure areas as a means for improving attractiveness to, and retention of, health workers. This would need to be led by the MoPHP, Ministry of Finance and other government bodies with support from aid/development partners.

- Attracting health workers who have left Yemen to return, through: (1) linkages with host countries; (2) guaranteeing better working conditions and salaries; (3) negotiating with employers overseas to facilitate temporary release, ensuring posts would be available on return. This could be led by Yemeni embassies abroad, working in cooperation with national and international professional agencies.
- Re-establishment of professional associations, active before the conflict, but whose activities have been severely curtailed by the fighting.

Ensuring the safety, health and wellbeing of health professionals is a key concern. Participants were unanimous on the need to protect the rights of health professionals to safe passage when performing their work, and of the need to protect healthcare workers from the risks the conflict poses to their own physical and mental wellbeing.

Group 3: health services, medicines and medical technologies

Members of this discussion group acknowledged complaints among Yemenis about 'waste' in health service provision before the conflict. There could be post-conflict opportunities to put in place clearer prioritisation of health spending. Participants acknowledged health service provision is patchy, with delivery continuing in some parts of Yemen but clear deficits - if not complete collapse - elsewhere. There is a need to identify and map gaps in service provision. Any post-conflict reconstruction planning work would need to engage seriously with challenges posed by political division, and the possibility of ongoing tensions at a community level both as a direct result of the conflict, and as a result of ongoing population displacement. Participants particularly considered prospects for devolving control over health service delivery to local areas – to what degree that outcome was possible or desirable, and which services should be included.

Participants identified some broad principles for reconstruction of health services. First, service design in the post-conflict period would need to be collaborative with close engagement with local populations. Second, preventive strategies should have priority given the likely strained financial circumstances in the post-conflict period.

Priorities for action should include:

- Strengthening prevention through a focus on high quality primary healthcare - in an effort led and coordinated by the MoPHP, WHO, UNICEF, NGOs and major funders. This would need promotion from locally-elected leaders and champions to have purchase. The post-conflict period offers an opportunity to redesign as well as rebuild services.
- Workforce strengthening and training to ensure an adequate supply of suitably trained staff (led by the MoPHP).
- Developing ethical standards and incentive structures for health service workers that help to tackle corruption (an initiative that would need to be led by the MoPHP centrally, with capacity building support from NGOs, and close involvement of leaders in communities).
- Focus service development around core needs for malnutrition, mental health, and disability (led by the MoPHP, Ministry of Education and those in local communities).

Group 4: health information and research

Participants agreed that information deficits in the context of ongoing conflict are a severe impediment to health planning processes. It is clear that basic health information needs are not currently met. Deaths are not routinely recorded in Yemen (and the challenges of doing so in conflict settings are well recognised). And for those recorded, cause of death is often ambiguous. There are deficits in routine surveillance and monitoring and little grasp - at the moment - of the scale and scope of health needs among Internally Displaced Populations, the vast majority of whom live in informal settings (i.e. outside settled camps). Finally, communicating health information from Yemen to donor agencies is patchy. This has possibly contributed to deficiencies in the response to date.

Group participants also identified some important deficits in health information predating the conflict. These included flows of information from the primary healthcare system, nutrition centres and private sector to decision-makers. Other deficits included reporting of births and deaths by midwives, and information sharing between hospitals and health centres to improve continuity of care. All these need addressing in a post-conflict environment.

Priorities for action in this context would include:

- Focusing surveillance on primary causes of mortality in Yemen, most likely through community-based information gathering. This could be performed by community leaders (e.g. Imams), gathering data on deaths by age, gender and other key descriptors. A nationwide effort would need leadership from the Ministry of Health and local authorities, with support from donors and international NGOs.
- Strengthening existing surveillance systems – both the Integrated Monitoring System and Early Warning Systems[7] – with a focus on emphasising

[7] Early Warning Systems operational to a greater or lesser degree in Yemen include the Famine Early Warning System (FEWS - http://www.fews.net/east-africa/yemen) and the electronic Disease Early

current major information deficits (led by the Ministry of Health and WHO).
- Setting up surveys in the most affected areas using a newly established health information unit, bringing together data on health needs across Yemen – led by the Ministry of Health and Yemen Polling Centre. Then mapping information gathered - along with NGO and donor assessments, and census data - to establish a clearer sense of needs in different parts of the country.
- Strengthening systems for data collation and dissemination. Including improving accessibility of reports, using data for health education, and using new technologies to support dissemination.

More generally, there is a need to consider types of data for collection and accessibility; including exploring the use of social media for information gathering purposes.

Cross-thematic priorities for action

Participants at the workshop identified areas where broader action is likely required:

- There was widespread agreement among participants that long-standing health challenges in Yemen - such as antenatal care, malnutrition and child health - would continue to be priority areas for action in a post-conflict environment. Many felt that prevention should form a central part of future health system design.
- Yemen has a large number of educated young people whose skills are underutilised. Encouraging the mobilisation of these individuals through education and support, and supporting them with external technical expertise could aid the development of effective long-term solutions for health and healthcare in Yemen.

Potential actions for the Yemeni diaspora community

A key function of this second workshop was to discuss with diaspora attendees concrete actions that *they* could take to facilitate health system reconstruction in Yemen. Some domain-specific actions were identified, but most were cross-cutting. Domain-specific proposals included:

- Workforce: engaging with NHS providers to support temporary staff leaves of absence to travel to Yemen to provide field support for Yemeni health professionals, ensuring temporary release so that they could return to their NHS posts and salaries after short stints abroad. However recognising the restrictions imposed by NHS providers on travel to areas deemed 'unsafe'.

Cross-cutting proposals included:

- Technical and financial support: a clear opportunity for members of the diaspora to support reconstruction efforts is directly through contributing technical expertise (health specialists) and aid (all diaspora Yemenis). To be effective, though, these contributions need to be targeted to carefully designed, evidence-based programmes.
- Advocacy: repeatedly emphasised by participants, advocacy should focus on MPs, UK government departments (including the Department for International Development) and academic research departments, to share information about emerging health needs and priorities for action.
- Fundraising: to support both near-term relief efforts and longer-term reconstruction.

Next steps

This report has identified a range of potential implications for the health system in Yemen amidst ongoing conflict. The report highlights some priorities for action. Next steps in this project include broadening the process of engagement – both among Yemeni diaspora and in Yemen – to build consensus on a vision for the health system there; and, technical work to develop specific proposals answering the needs identified above.

For further information on this project please contact sharif.ismail15@imperial.ac.uk.

Warning System (eDEWS - http://www.moh.gov.ye/English/eDEWS.html) which reports on communicable disease cases across a majority of governorates in Yemen.

Appendix: workshop attendees

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Anne Thwaite

Diana Nasser

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Louice Lundin

Nabil Alsuraimi

Nada Taqi

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Shaima Hassan

Sharif Ismail

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The project partners

About *Musāhamatna*

مساهمتنا
Musahamatna

The Yemen Health Network (*Musāhamatna*) is a newly established civil society initiative bringing together diaspora Yemenis (including health specialists), health professionals, humanitarian aid workers and health practitioners, researchers and others to consider how to support health system rehabilitation and reconstruction in Yemen after conflict. *Musāhamatna*'s activities are focused on creating a neutral space for discussing health in Yemen, and fostering peacebuilding through this, while providing practical and evidence-based recommendations on ways of supporting health system reconstruction. For further information about *Musāhamatna* and its work please contact sharif.ismail15@imperial.ac.uk.

About Medact

Medact
health professionals for a safer, fairer & better world

Medact educates, analyses and campaigns for global health on issues related to conflict, poverty and the environment. We aim to mobilise the health community to support policy change and shift public attitudes. Medact works across four distinct but interconnected programme areas: war and weapons; climate and ecology; economic justice; and health and human rights. We seek to reduce premature death and suffering through targeting the root causes of poor health. We do this by campaigning for better living standards, peace, human rights and economic justice.

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About ReBUILD

ReBUILD Consortium

The ReBUILD Research Programme Consortium is an international research partnership, funded by the Department for International Development, led by the Liverpool School of Tropical Medicine and Queen Margaret University, Edinburgh, with partners in several post-conflict countries. Through its research on post-conflict health financing, the health workforce and aid architecture, ReBUILD is working to provide evidence for decision-makers and implementers, leading to improved health systems and better access by the poor to effective health care in post-conflict and post-crisis settings.

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About Saferworld

SAFERWORLD
PREVENTING VIOLENT CONFLICT. BUILDING SAFER LIVES

Saferworld is an independent international organisation working to prevent violent conflict and build safer lives. We work with local people affected by conflict to improve their safety and sense of security, and conduct wider research and analysis. We use this evidence and learning to improve local, national and international policies and practices that can help build lasting peace. Our priority is people – we believe that everyone should be able to lead peaceful, fulfilling lives, free from insecurity and violent conflict.

We are a not-for-profit organisation with programmes in nearly 20 countries and territories across Africa, the Middle East, Asia and Europe.

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About Liverpool Arab Arts Festival (LAAF)

Liverpool Arab Arts Festival

Liverpool Arab Arts Festival was founded in 1998 by Liverpool Arabic Centre and the Bluecoat to provide Arabic arts and culture in Liverpool. Over the years this partnership has grown to include most of the major arts institutions in the city including Picturehouse at FACT, National Museums Liverpool and Liverpool Philharmonic Hall as well as artists and community organisations. The first festival took place in 2002 and it has run annually since as a celebratory event raising awareness and promoting an understanding and appreciation of Arabic culture for both Arab and non-Arab audiences in Liverpool and beyond.

The festival has grown rapidly over the years in size, confidence, expectation and ambition and remains the only annual festival of its kind in the UK. Key funding for the festival has been secured from Liverpool City Council and Arts Council England.

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